



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/585,870

07/10/2008

Takeshi Nakayama

062660

7225

38834

7590

12/24/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

VERAA, CHRISTOPHER

ART UNIT

PAPER NUMBER

3611

NOTIFICATION DATE

DELIVERY MODE

12/24/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

| | | | |
|------------------------------|---|--|--|
| Office Action Summary | Application No. 10/585,870 | Applicant(s) NAKAYAMA ET AL. | |
| | Examiner CHRISTOPHER E. VERAA | Art Unit 3611 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/11/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites that the sign surface is “processed with dirt-proof processing.” In a device claim, the processes used to produce the device only limit the scope of the claim inasmuch as they define the resulting structure. In this case, the term “dirt-proof processing” is not clearly defined by the specification to adequately define a resulting structure of the device. The claim is therefore indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US-5759671) in view of Watanabe et al (US-5818640).

As to claims 1 and 2, Tanaka teaches a traffic sign apparatus in figure 8 comprising a sign body 13 with a sign surface that emits light by ultraviolet irradiation.

Art Unit: 3611

Tanaka includes a irradiation device 14 for irradiating the sign surface. Tanaka lacks teaching the specific angle ranges or the linear dimension ratio ranges recited in the claims. Watanabe et al teaches a road sign that is illuminated by a light source. Watanabe et al teaches the particular importance of the position and angle of the light source relative to the display surface as it effects the illumination of the sign surface. Since the design criteria and control variables were known in the art of road sign illumination, the specific dimensions claimed are mere optimization of dimensions, which is within the ordinary capabilities of one skilled in the art and would have yielded predictable results at the time of the invention.

As to claim 3, Tanaka teaches a plurality of UV emitting elements 14, having different irradiation angles relative to the sign surface.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US-5759671) in view of Watanabe et al (US-5818640) and further in view of Ward (US-2015170).

Tanaka lacks specific teaching of quartz tubes. Ward teaches that it is well known in the art of UV radiation sources that quartz tubes are preferred since quartz does not fatigue and become non-transparent to UV light over time (see Ward, column 3, lines 54-61). It would therefore have been obvious to one of ordinary skill in the art to use quartz tube UV emitting elements.

Claim 5, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US-5759671) in view of Watanabe et al (US-5818640) and further in view of Kochanowski (US-6029382).

Tanaka does not teach "dirt-proof processing". Kochanowski teaches a reflective road sign that is coated with silicone, acrylic, or TEFLON to make the surface resistant to dirt, damage, and vandalism (Kochonowski, column 6, lines 19-32). It would have been obvious to one of ordinary skill in the art to coat the Tanaka device with a dirt-proof coating, since it is intended for use outdoors, where dirt is a well known problem.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER E. VERAA whose telephone number is (571)272-2329. The examiner can normally be reached on Monday through Friday, 8:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. E. V./
Examiner, Art Unit 3611

/LESLEY D MORRIS/
Supervisory Patent Examiner, Art Unit
3611